NEWSLETTER July 2017

Comments

The month of July brings us further PEEMS events to report on, with the railway at the Malton Show, the Mike Sayers Trophy night and a PEEMS excursion to Scarborough's North Bay Railway.

John Powell has now informed us that the PEEMS workshop will be soon ready for all members to use. It should be noted that if any member needs to start a project, he should contact George, who will let them know when he can accommodate them.

At the Club meeting on the 5th July, the Chairman brought up the subject of the newsletter. Because of the more illustrative nature of the current newsletter, the most effective way of presentation is via the Club website. The Club does recognise that there are some members who have no internet access, and these members do prefer to receive hard copies through the post. There are currently seventeen members in this situation. Whilst the website is free for members, posting hard copies involves both copying and postage costs, both of which are dependent on the number of pages in each edition. To keep costs down, black and white copies are sent to members whilst the website version is in colour.
A brief discussion was held where suggestions were made by those present. Some members suggested that volunteers print out a copy or copies for members to receive, and someone else said that in one club he belonged to, the newsletters were put in a box for collection on club nights. Another suggestion is that any member requiring a hard copy could find someone who lives close by and do a deal with that person to provide them with a copy. Some members are prepared to pay for their postage.

The Chairman thanked everyone for their ideas, and said this will be discussed further at the next AGM.

Finally, as reported in the last newsletter, Mike and Pat Sayers' garden party in June raised substantial donations for the "Next Steps" and "Ryedale Special Families" community projects. Letters of thanks have been received from both projects.

The Railway

Some updates:

The railway has an extensive season this year with a further four outings, and volunteers are required for setting up, running the railway and dismantling.

22nd/23rd July (Sat/Sun) ~ Wolds Vintage Rally ~ Fangfoss. This will be the first time at this rally.

25th July (Tues) ~ Ryedale Show

5th August (Sat). The Lions are having a Gala Day at Lady Lumley's School Pickering, in the afternoon. The plan is to setup the railway around 11.00am and pack up between 4.30 and 5.00pm

12th/13th August (Sat/Sun) ~ Driffield Steam Rally. This event is now confirmed for the railway.

- Peter Bramley's Comments.

  Although the Malton show was successful, and takings were above expectations, a small expenditure has occurred due to the trailer carrying the railway, almost failing on the way back. The trailer has now been repaired by Tony Leeming, Peter Bramley and Mike Sayers, all of whom put in a great deal of effort to bring it back into use. Peter wanted to give special thanks to Mike for facilitating the repair process.

- The Chairman's Comments.

  We have to look forward to the day when PEEMS members can no longer assemble and dismantle the railway.

  The main problem is the lifting of the rails onto and off the trailer, especially as they are stacked alternately 'rail up' and 'rail down'. At the Malton Show, no member had to lift a rail because all the hard work was done very efficiently by Malton Young Farmers, who were "compensated". PEEMS does not have that facility at other shows.

  The committee has discussed craneage on the trailer, and lifting and handling aids, so that there is no requirement to keep bending.

  There are however, other jobs with the railway, such as driving the locomotive, helping customers on and off the carriages, and Ron Baier got a special mention for his excellence in interfacing with and encouraging the customers, thus enhancing their "PEEMS railway experience".
  Five PEEMS members were present on the Saturday before the Malton Show, four of the five were also present on the Sunday to run the railway, and three of the five were there on both days. None of the four people on the Sunday had a chance to take time off to see the rest of the show because they were so busy. The Chairman stated that if the railway is to continue we need more help from members.

  The Chairman commends the following members for their efforts at the Malton Show:

  Ron Baier, Dave Hicks, Tony Leeming, and Eric Foot.

  Peter Bramley gets a special commendation for his organisation of the railway this year.

- The Editor's Comments

  I asked what function the railway performed in the Club, apart from revenue generation, and the consensus was that the railway not only advertised the Club at the various venues that it attends, but it was important that the Club was outward looking. It obviously brings a lot of pleasure to the community, all of which should be borne in mind when we decide on the way forward.

Forthcoming Events

- **The "Clock Focus Group"** that John Powell has instigated will start 30 minutes prior to the next Club meeting, which will be on Wednesday 2nd August at the W.R.V.S. in Pickering.
  At around 6.30pm questionnaires will be distributed. So far, at least six members have shown an interest in this group. Of course, anyone else who is interested in joining this group should contact either John Powell or Richard Gretton grcgretton@btinternet.com .

- **The Next Club Meeting** on Wednesday 2nd August will be a "Bring And Buy" auction. Application forms are attached to this newsletter.

- **PEEMS Model Exhibition At Pickering Station 24th to 28th August. (Thurs-Mon)**

  PEEMS will be mounting an exhibition of models at Pickering Station over the above dates. This is now a fixed date in the calendar, but arrangements still need to be made. The exhibition will be in same location as before, in the room on Platform 2.

Malton Show On Sunday 2nd July

The Malton Show was held in Scampston Hall Park.

The PEEMS railway went very well, and was reasonably busy all day, generating a decent revenue.

In addition to the railway, Brian Stephenson had models on display, and Ken Hopper always has an interesting forecourt:

(*Thanks to Ron Baier for the photos*)

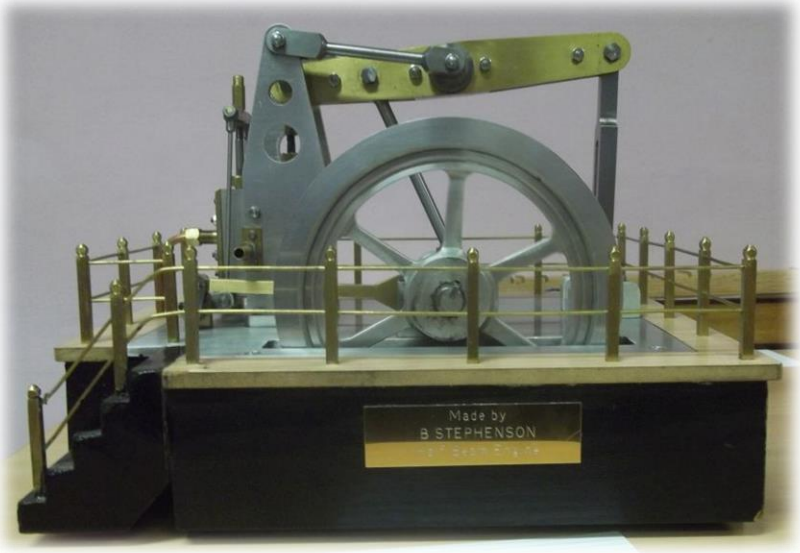
The Mike Sayers Trophy ~ Club Meeting on Wednesday 5th July

The Mike Sayers Trophy evening is an annual event which allows members to bring in projects for inspection. There is a vote amongst attendees and presentation of the trophy and prizes.

The club meeting saw a good turnout of members, with two new guests, Andrew Skinner and Tim Webster. The last few club meetings have seen new people turning up and showing an interest in the Club. The Club hopes that the evenings they attended will encourage them to continue.

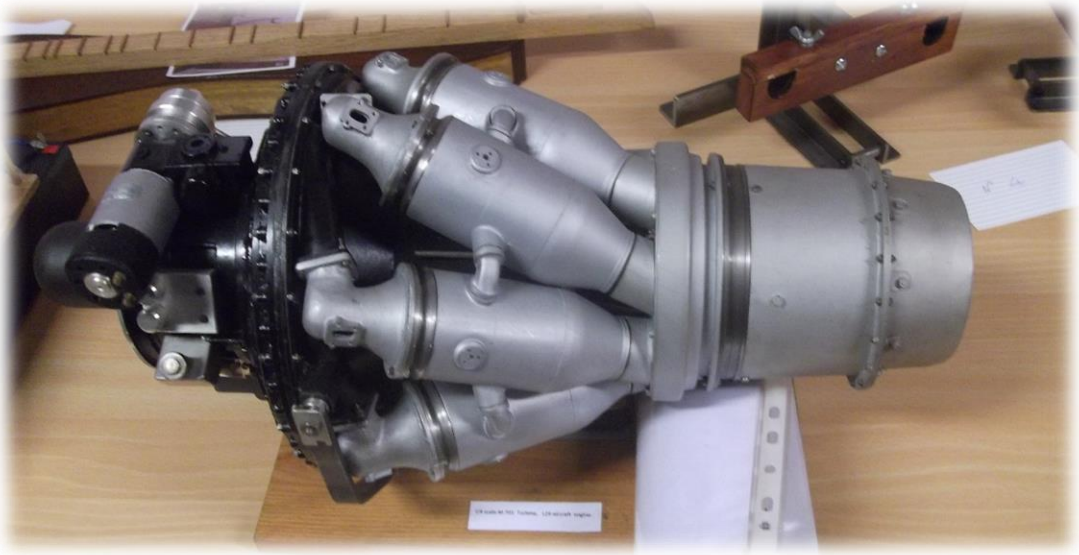
Five projects were on display this year:

- **Brian Stephenson ~ Half Beam Steam Engine.**
  As Brian explained it, this is a steam engine used in industry in days gone by.



- **Harold Hulse ~ Appalachian Dulcimer**
  Harold has been making early stringed instruments from scrap material for the past twenty to thirty years. The instrument displayed was an Appalachian dulcimer used for making “Mountain”, or “Hill Billy” music as it is known “across the pond”. This instrument is known across the world.
  The instrument shown is unfinished, with the tuning gear and three strings needed to be fitted.

- **John Heeley ~ ¼ Scale Czech Motorlet M-701 Turbojet For The L-29 Trainer Aircraft.**
  John said that the model is 65% complete, and will require another two years to finish. There is currently nothing in the combustion units, and the next job is the combustion chamber liners.
  There is a full description of this model in the March edition of the newsletter which is available on the PEEMS website. John wanted to make it clear that this was not a copy of a Rolls Royce engine, which may have been the impression given in the March edition.



- **Tony Leeming ~ Locomotive Building and Display Stand.**
  Tony has based this building stand on the design provided by Colin Abrey in 'Model Engineer' magazine 5th August 2005. This stand allows model locomotives to be rotated 360° to allow access to all areas. The operation is by a threaded rod, and Tony has also added a ball race.

- **Paul Gammon ~ British Rail Class 08 Shunting Engine**
  This model runs on electric, and has been running on the track at Gilling East. It is easy to operate. The model contains a sound card which gives a realistic audio representation of the loco as it builds up speed and runs. The original chassis was an aluminium casting, but the model Paul brought in was laser cut steel. The superstructure is a fibre glass moulding. The model is a kit.

- This year's winner of the Mike Sayers Trophy was Brian Stephenson, with John Heeley receiving the 2nd prize (£15) and Tony Leeming the 3rd prize (£10).
  Brian thanked everyone, but said that it was disappointing that only five exhibits were on display this year. He hoped that there will be more members displaying their projects next year.

PEEMS Visit To Scarborough's North Bay Railway (NBR) On Wednesday Evening 19th July

PEEMS Members And Guests With 'Georgina' And Driver Nick At The Scalby Mills Turntable

PEEMS members and guests enjoyed an excellent evening at the North Bay Railway at Scarborough. The weather was good, and preceding the ride on the railway, there was open-air dining on scampi and chips next to the lake. The evening was very well attended, with over thirty members and guests enjoying 'sea and steam'.

North Bay Railway were very generous in opening the railway to the Club for the evening, not only for the ride, but for an excellent historical talk by the enthusiastic General Manager Steve Johnson in the engine shed. Both Steve and the driver Nick are to be commended for providing this service, because the event finished at about 9 o'clock in the evening. NBR were also very hospitable in allowing 'steam-head' PEEMS members to ride on the footplate in both directions. Grateful donations were made to the railway.

NBR was built in 1931, to 20" gauge (508 mm), and runs for approximately ⅞ mile (1.4 km) between Peasholm Park and Scalby Mills in the North Bay area of the town. Scalby Mills station is just above the 'Sea-Life Centre'.

As Steve explained, 'Georgina' was a new steam engine, was one year old on the 23rd March, and was approaching the 'terrible two's'. She has been very reliable up to now, and is worked very hard on the railway, and on the evening pulled five carriages, although these were not completely full. NBR was a very challenging railway for a steam engine, (the other four locomotives are diesel-hydraulics). As Steve explained Nick would be heavy on the regulator, so we would all have the 'steam experience' and this was especially true when Scalby Mills station was being approached, (according to one PEEMS member, the slope is 1:33).

'Georgina' is a full size updated design based on a 0-4-0 loco originally built by Bagnall in Stafford. She is a Sipat class saddle tank, originally built in 1909 for the Sipat Water Works in India. She is believed to be the first full size steam engine built in Scarborough.

The Engine Shed

The finale of the evening was the visit to the engine shed where Steve gave us some background to the railway. The shed housed three of the locomotives which operate on the line. These three locos were 4-6-2's and were manufactured by Hudswell Clarke of Leeds in the early 1930s. Although they look like steam locos, all three are diesel-hydraulic. There was another locomotive, also diesel-hydraulic, and manufactured by Hudswells (1932), which was outside the shed. It is a 4-6-4 Tank and you can find pictures of it on the internet, (with better quality photos of the other three than those shown below).
Steve started by telling us that when the council owned the railway, they were very strict on who was allowed in the shed, but under the current ownership this had been relaxed, as there is a lot of interest. People don't realise how big the locos are until they stand next to them. The idea of the railway came about with the development of the whole area. Someone playing golf in the area realised that here was a natural theatre after he heard his echo of 'Fore', and that gave the idea for the theatre, but no-one knows how the railway came about. From the first council meeting about the development there was always going to be a railway. Various designs for the railway were submitted, one being a grand affair with two viaducts which was going to go in a circle around the valley. Steve said that as the final railway took people from A to B it was classified as public transport, with the advantages and disadvantages that that entails. The council took responsibility for building the tracks, the locomotives were put out to tender, and Hudswell Clarke (Leeds) won the contract.

- **Neptune** (Built 1931).

Neptune weighs 10 tons. Steve reckoned this engine was the most beautiful thing in his life (apart from his girlfriend of course!). Neptune was the very first loco built for the railway and is the oldest diesel-hydraulic engine in the world. Diesel-hydraulic means that the diesel engine drives a hydraulic pump which drives a hydraulic motor which drives the front set of driving wheels, using a big chain like a motor bike chain. All the steam piston motion is "pretend", apart from the coupling rods between the wheels, which transmit the power from the front axle to the back two. Neptune was built as an experimental loco to investigate diesel electric traction, thus receiving a government grant. Neptune was built with five carriages, and the train seats about one hundred to one hundred and twenty people.
Neptune was delivered from Leeds on the 22nd May 1931, ready for the opening on the 23rd May, however, it arrived unfinished on a low loader at 11 o'clock at night. The lads worked through the night to get her running. Neptune pulled the first train out at 2 o'clock on the 23rd May, with the members of the council onboard, and it broke down at the tunnel. They got it running again, but officially it left at 2 o'clock. Diesel-hydraulics were a new form of power, and there were some breakdowns. As there were very high passenger numbers, and hence revenue, the council decided to order a second loco as backup, this being Triton:

- **Triton** (Built 1932)

There are some differences between Triton and Neptune. Triton is one inch higher, no one knows why. Neptune and Triton ran together for a very long time on the NBR. The fact they are still running eighty five to eighty six years later is incredible, especially as they are both the oldest diesel-hydraulic locos in the world and they should have more credit for being the prototypes for this type of traction. At the same time as Neptune and Triton were being built, there were plans to build a railway at Golden Acre Park in Leeds (now a nature reserve). Two locos were built for operation there, Robin Hood, the 4-6-4 Tank mentioned earlier and which was outside the shed, and Poseidon, which like Neptune was based on the Flying Scotsman.

- **Poseidon** (Built 1933)

Poseidon needs a lot of TLC. It still works, but is a "pig to drive", and tends to "shake, rattle and roll" a bit. There are plans to do it up, but the railway only really needs two locos to be operational, and currently all the focus is on Georgina. Poseidon and Robin Hood were built to run in Golden Acre Park, and after that closed in 1938, they both led a nomadic existence, with many years at Morecambe, and Blackpool Pleasure Beach (BPB), although they did not run there. They were transferred to NBR in 2006. There are nine locos of this type of diesel hydraulic traction in existence. Four are at NBR, three are at BPB, and two, based on the LMR Princess, are at the Midland Railway Centre (Butterley). Of the latter two, one was sacrificed to make the other runnable. This means that of the nine, eight are capable of being run.

The Locomotive Project.

As explained in the previous newsletter, I have adopted two 3½" gauge loco chassis which John Heeley had donated to PEEMS as unfinished projects.

John had manufactured all the parts himself about thirty years ago, and the accompanying boilers had been sold off. Most importantly there are no assembly drawings.

One of the locos Is a 2-6-0 and the other is a 4-4-0, the latter corresponding to a 1907-1909 Midland Railway Class 990 'Deeley' 4P.

John suggested that as a start, the 4-4-0 should be developed to run on air, as all the components of the running gear were present. In fact, John had run it on air before dismantling the parts and storing them in boxes.

A photographic inventory checked by John, had identified all the components of the running gear so without any drawings, the effort has been into assembling all the parts, into a moving assembly that can be run on air.

This month's job, has been to perform a "form, fit and function" check on all the components of the assembly. The various components are shown on the following pages with a description of their functions.

The important feature of the 4-4-0 is that the Deeley 'scissor' valve gear, the valve chest and rods, (sitting on top of the steam chest), and the rods connecting the steam pistons to the wheel cranks, operate between the chassis frames in a volume of about 3" x 3" x 9". It looks very tricky, but it is good to know that this has run before.

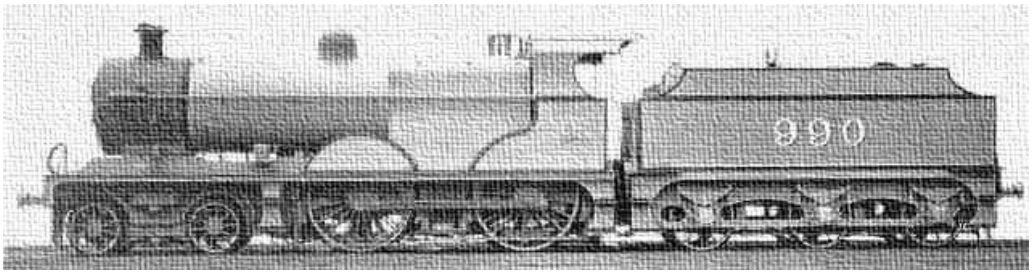
The Deeley valve gear that John built was based on the diagram in Martin Evans' book "Model Locomotive Valve Gears", but is an approximation of the diagram, so all the other parts need to be assembled in place before the valve gear is connected up. The valve gear is also connected to the reversing gear and the reach rod operated from the cab.

Hopefully in the next newsletter, the full assembly can be shown.

After all the current components have been assembled, they will be disassembled and all the parts thoroughly cleaned, and protected. An example is the brake adjustment rods which are in-operable due to rust.

The next job will then be the build of the rotating jig which will be essential for working on both locos. The rotating jig will also act as a display stand, especially for running the 4-4-0 on air. Tony Leeming has given me the drawings by Colin Abrey for the jig, from 'Model Engineer' 5th August 2005. This will be similar to the stand Tony presented at the Mike Sayers Trophy evening, (see earlier)

Hopefully, in time for the next Doncaster show, a boiler will be built, probably for the 4-4-0, ready for steam running later.



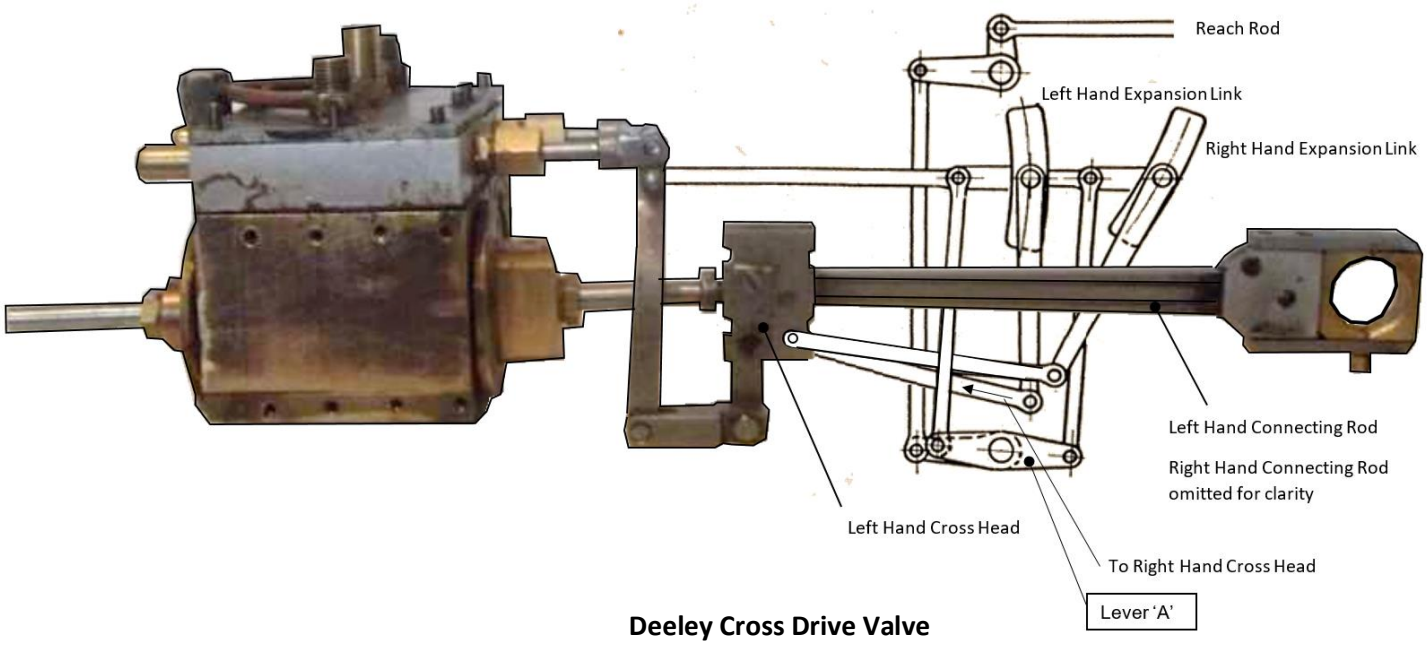
The Deeley Valve Gear.

In the last Newsletter, it was erroneously stated that the Deeley valve gear is not explained in Martin Evan's book 'Model Locomotive Valve Gears'. There is however, a passing reference to it and there is diagram (Fig 45) in Chapter VII 'Valve Gears For Three And Four Cylinder Engines'. Martin Evans explained:

- 'Scissors' valve gear was first fitted to the 4-cylinder express locomotive No. 40 'North Star', (GWR) designed by G.J. Churchward.
- The valve gear fitted between the frames, and no eccentrics were used.
- The combination levers, were driven by the main crossheads, as in the Walchaerts' arrangement,
- The levers to operate the expansion links, were derived from the opposite inside crossheads by means of a reduced linkage.
- Scissor gears were made possible because the main wheel cranks were at 90° to each other.
- Although satisfactory in service, the scissors gear was discontinued in favour of a Walchaerts arrangement for later GWR 'Star' class locos.
- Swindon was accused of making use of the Deeley valve gear without acknowledgment.
- Deeley (Midland Railway) designed a valve gear similar to No. 40's and had fitted it to the famous 4-4-0 No. 990.

Deeley or Churchward weren't the first to use this type of valve gear as Stevart in Belgium and Lewis and Young in the U.S.A. used cross linked valve gears driven by the wheel cranks at 90° to each other.

A representation of the Deeley valve gear (as drawn by Martin Evans) superimposed on the current steam piston and valve gear:



Deeley Cross Drive Valve

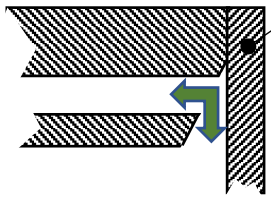
Fig A

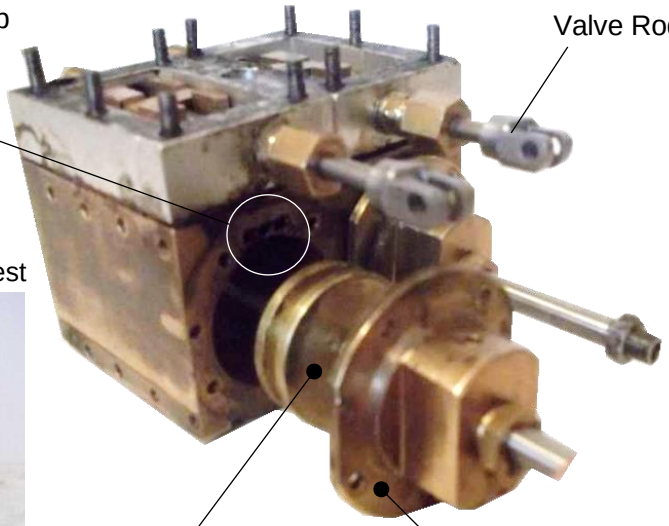
John Heeley used the Martin Evans diagram to manufacture and construct the valve gear for the 4-4-0.

The valve gear as manufactured by John is shown in the previous newsletter.

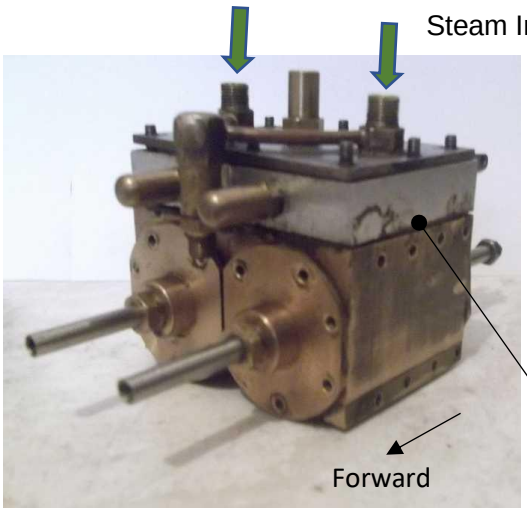
Hopefully, the full assembly will be shown in the next newsletter. *Nevile*

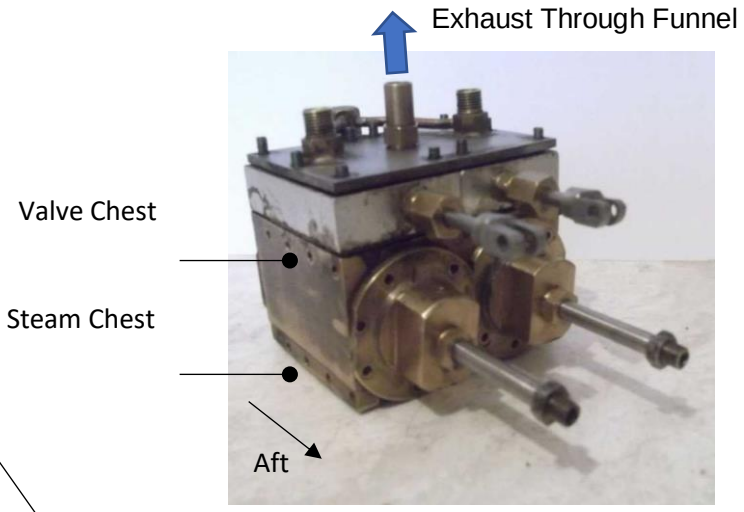
Steam And Valve Chests





Three Parallel Steam Ports Both Ends Of Steam Chest

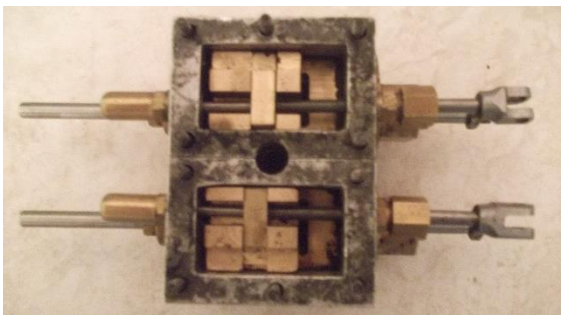




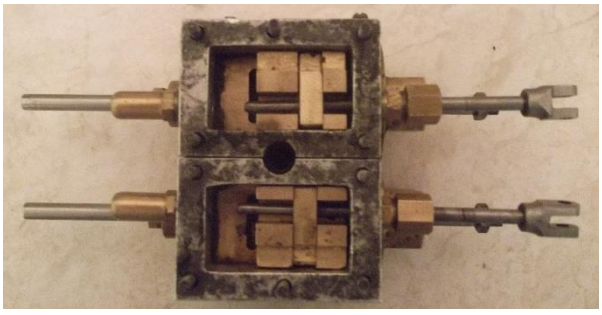
Hylomar® Universal **Blue** gasket & jointing compound recommended for the **gasket between the valve and steam chests**

View Onto Valves (valves adjusted by screw thread on the rods):

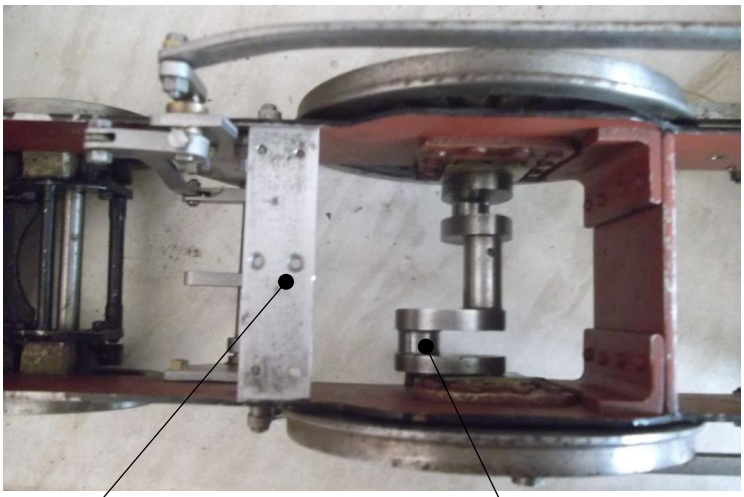
Valve Rods Forward



Valve Rods Back



Reach Rod Attaches To Reversing Lever



Contact

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